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Symbol	Name	Synonyms	Organism
<b>ITGB1</b>	integrin, beta 1 (fibronectin receptor, beta polypeptide, antigen CD29 includes MDF2, MSK12)	CD29, CD29 antigen, Fibronectin receptor beta subunit, Fibronectin receptor subunit beta, FNRB, GPIIA, Integrin beta-1 precursor, Integrin VLA-4 beta subunit, Integrin VLA-4 subunit beta, MDF2, MSK12, VLAB, VLA-BETA	Homo sapiens

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We show here that an antibody which recognizes the beta-subunit of VLA-4 (CD29 ) on T cells can inhibit CD4+ cell proliferation triggered by CD2 or CD3, and that binding of this antibody to activated T cells leads to an increase in cyclic AMP levels which is comparable to that elicited by forskolin. [1989]



Monocytes of type 1 diabetic patients displayed an increased adhesion to [fibronectin](#) in comparison with type 2 patients and healthy **control** subjects but had a normal expression of the [FN](#) **binding** integrins [CD29](#), [CD49a](#), [CD49d](#), and [CD49e](#) (although [CD11b](#) and [CD18](#) expression was increased). [2004]

Cross-linking of [VLA/CD29](#) molecule has a co-mitogenic **effect** with anti-CD3 on [CD4](#) cell activation in serum-free culture system. [1991]

The above results strongly suggest that the [VLA/CD29](#) family of antigens may play an important role in **regulating** [CD4](#) T cell activation via the CD3-T cell receptor pathway. [1991]

FACS results showed that the MSCs did not express antigens [CD34](#), [CD11a](#), and [CD11b](#) and **expressed** [CD29](#) and [CD71](#), an expression pattern identical to that of human bone marrow-derived MSCs. [2003]

In contrast with the activating [CD29](#) mAb 8A2, a combination of blocking [CD49](#) mAbs or the nonactivating but blocking [CD29](#) mAb A1B2 failed to **inhibit** completely [eosinophil](#) migration over FN-preincubated or HUVEC-covered filters. mAb 8A2 **stimulated binding** to [FN](#) but not to HUVEC. [1993]

Enhancement of anti-CD3 induced proliferation by immobilized [fibronectin](#) was completely **inhibited** by a mAb to [CD29](#), the [integrin](#) beta 1-chain (4B4) and not by a variety of other mAb. [1990]

Adhesion of LPS-U937 cells treated with mN1-11 to [fibronectin](#) was completely **blocked** by [CD29](#) (beta chain of very late antigens) mAb. [1996]

Antibody to the [integrin](#) beta 1, chain ([CD29](#)) eliminated **binding** to collagen and laminin but not to [fibronectin](#), [fibroblasts](#), and HT-29 monolayers. [1996]

[CS-1](#) peptide was also found to **inhibit** [CD29](#)-induced [histamine](#) release but had no significant **effect** on [CD49d](#)-induced [histamine](#) release. [1995]

Adhesion to [FN](#) was **mediated** by beta 1-integrins [alpha 4](#) beta 1 ([VLA4](#)) and [alpha 5](#) beta 1 ([VLA5](#)) since **blocking** antibodies against beta 1- ([CD29](#)), [alpha 4](#)-([CD49d](#)), or [alpha 5](#)- ([CD49e](#)) [integrin](#) subunits, completely reversed the effect of [HGF](#) /[SF](#). [1997]

In addition, the comitogenic effect of ECMs could be mimicked by immobilized mAb reactive with a common beta 1 chain ([CD29](#)) of very late **activating** (VLA) antigens which include [ECM](#) receptors. [1994]

Some [CD29](#) antibodies partially **inhibited** [CD98](#)-induced aggregation, and these antibodies were neither agonistic for aggregation nor inhibitors of beta1-integrin binding to substrates. [2001]

Aggregation induced by [CD98](#) antibodies could be distinguished from that **induced** by beta1-integrin ([CD29](#)) [ligation](#) by lack of sensitivity to [EDTA](#) and by increased sensitivity to [deoxyglucose](#). [2001]

However, [coculture](#) of endothelial cells with [CD29](#)-**stimulated** [neutrophils](#) in the presence of 0.1-10 U/ml [TNF-alpha](#) strongly induced [neutrophil](#) transmigration. [2004]

Pretreatment of [neutrophils](#) with either a [CD29](#)-**stimulating** monoclonal antibody or the addition of [TNF-alpha](#) (0.1-10 U/ml) to the [coculture](#) failed to induce transendothelial migration. [2004]

[CD45](#) [ligation](#) **up-regulated** surface adhesion molecules and **enhanced** [CD29](#)- and [CD98](#)-induced aggregation. [2003]

Furthermore, in BD a significantly increased proportion of the [gammadelta T](#) cell population expressed [CD69](#) and high levels of [CD29](#) and were **induced** to **produce** [IFN-gamma](#) and [TNF-alpha](#) compared with healthy controls. [1999]

The Jun N-terminal kinase (JNK) inhibitor SP600125 and the anti-beta(1) [integrin](#) (CD29) **function-blocking** antibody were used to assess [JNK](#) activation and [integrin](#) dependence, respectively. [2007]

However, a CD29 mAb which **inhibits** homotypic [cell aggregation](#) could not block this [IL-8](#) production. [2002]

CONCLUSIONS: [Mechanical stress](#) on the [LNS](#) and RI in the shoulder may **induce** [ERK1](#) and [JNK](#) to **express** NF-kappaB by CD29 to develop capsule [contracture](#), producing [MMP-3](#), [IL-6](#), and [VEGF](#). [2009]

Monoclonal antibodies to beta1 integrins beta-subunit (CD29) also strongly **induced** tumor necrosis factor-alpha and [interleukin-10](#) production, but not interleukin-12. [1999]

[IL-2](#) stimulation of [NK cells](#) resulted in an increase in the expression of adhesion molecules involved in **binding** of [NK cells](#) to [bone marrow fibroblasts](#) (BMF) and [extracellular matrix](#) (ECM) proteins including the beta 1 chain CD29, alpha chains of [VLA-4](#) and 5, [beta 2 chain CD18](#) and alpha L chain CD11a. [1995]

RESULTS: [Reverse-transcriptase polymerase chain reaction](#) [?] showed the MSCs to **express** the pluripotency marker gene [OCT4](#), and [flow cytometry](#) showed these cells to be positive for CD29, [CD73](#), [CD90](#), and [CD105](#) and negative for [CD31](#), [CD45](#), and [CD61](#). [2008]

The results thus show that adhesion molecules other than [ICAM-1](#), CD29, AND [CD49b](#) are responsible for the **induced** adhesion between [T cells](#) and [IFN-alpha](#)-pretreated [KB cells](#). [1995]

We further showed that CD29/[TNF-alpha](#) **mediated effects** involved [PI3K](#) and [tyrosine](#) kinase-dependent signaling via [MAPK](#) but were independent of nuclear transcription factor (NF)-kappaB activity. [2004]

[Flow cytometry](#) revealed a 6-fold increase in the number of hMSCs double-positive for [CD44](#)/CD29 or [CD90](#)/CD29 in group CL after 7 days in culture, compared with group C. [Telomere](#) length remained the same in cells from both groups during culturing. [2006]

We have analyzed immunohistochemically in situ expression of integrins (CD29, CDw49b, CDw49c, CDw49e, CDw49f) and [CD44](#) isoforms ([CD44](#) standard, [CD44](#) var/v6, [CD44](#) v10) on [frozen sections](#) of normal and psoriatic skin (nonlesional skin, lesional skin before and along with topical [calcitriol](#) treatment). [1997]

[CD44](#) (homing [cell adhesion](#) molecule) and very late activation antigen beta 1 (VLA beta 1; CD29) could be demonstrated on almost all [fibroblasts](#) without an alteration following cytokine stimulation. [1995]

In all cases, the surfaces of IL aggregates reacted for [CD44](#) but were consistently negative for CD29, also absent was [CD54](#). [2000]

Conversely, the integrity of the [endothelial cells](#) was underscored by their even reactivity for CD29, [CD44](#), and [CD54](#). [2000]

To investigate the mechanism by which [down-regulation](#) of TWIST leads to inhibition of adhesion to mesothelial cells (MCs), expression of adhesion molecules (CD29, [CD44](#) and [CD54](#)) were observed. [2007]

The analysis of [fluorescence](#) intensity (MFI) revealed that CB [monocytes](#) expressed some CAM (CD29, [CD54](#), CD102) with a lower intensity than AB [monocytes](#) except [CD44](#). [2001]

The expression of [ICAM-1](#) ([CD54](#)), beta 1 [integrin](#) (CD29), and [CD44](#) on [cytomegalovirus](#) (CMV)-infected human embryonic [fibroblasts](#) (HEF) was analyzed by [flow cytometry](#). [1995]

RESULTS: Flow cytometry analyses demonstrated that adherent spindle cells from bone marrow are mesenchymal stem cells (positive for CD29 and CD44, but negative for CD34 and CD45). [2007]

Inhibition was 30 +/- 5%, n = 18, P < or = 0.001 for CD29 versus 40 +/- 6% for CD49d. [1996]

In contrast to the basophil, crosslinking of either CD29 or CD49d failed to initiate histamine release in human lung mast cells (HR = 1 +/- 1% for CD29 and 2 +/- 1%, n = 15). [1996]

Crosslinking either CD29 or CD49d also failed to initiate histamine release from human lung mast cells (HR was 1 +/- 1% for CD29 and 2 +/- 1% for CD49d). [1996]

A second tyrosine kinase inhibitor, picotannol, also significantly reduced both CD29- and CD49d-induced HR (inhibition was 62 +/- 19% for CD29 and 56 +/- 14% for CD49d, n = 7, P < or = 0.05). [1996]

No apparent activation of cell cycle was observed, but CD29 and very late antigen-4 (VLA-4) expression was increased, as compared to the normal BM cells. [2006]

We found that cross-linking either CD29 or CD49d failed to initiate mediator release from the basophils of non-atopic and atopic donors [histamine release (HR) = 1 +/- 0.5% for CD29 and 1 +/- 0.5% for CD49d, n = 10, NS]. [1995]

CVC were immunopositive to antigens to CD29 and CD44 [?] but not to CD14 or CD45, consistent with other mesenchymal stem cells. [2003]

We have reported an immortalized line of human MSCs (hMSCs), KP-hMSCs, which expresses CD29, CD44, CD90, and CD105, and complies with the characteristics shared by mere hMSCs. [2006]

METHODS: The lymphocyte subpopulation and the expression of CD11a, CD44, and CD29 on CD4+ and CD8+ cells in peripheral blood lymphocytes (PBL), LNL- and LNL+ derived from 37 patients with gastrointestinal carcinoma were studied. [1996]

They were positive for CD29, CD44, CD106, and negative for CD34, CD45, HLA-DR and Ulex europaeus. [2001]

The human CD4 population can be divided into functionally distinct and largely reciprocal subsets based on their differential expression of CD45 isoforms (CD45RA, CD45RO) and the CD29/VLA beta chain. [1993]




A number of T cell surface antigens including CD45RO, CD38, CD11 alpha, CD29, CD44, and CD26 are present on differentiated T cells and identify T cell populations that respond to recall antigens. [1993]






RESULTS: Flow cytometric analysis of MSCs at passage 3 showed that these cells expressed high levels of CD29 (98.28%), CD44 (99.56%) and CD106 (98.34%). [2007]



Immunophenotypic studies showed that acute myeloid leukemia (AML) cells (n = 78) of the M0 to M5 subtypes of the French-American-British Cooperative Group expressed various amounts of adhesion receptors, including CD11a, b, c/CD18, CD49d, e, f/CD29, CD54, sCD15, and L-selectin. [2001]




Given that CD29 is currently regarded as critical for lymphocyte trafficking in general and for transvascular migration in particular, and CD54 is also involved in transvascular lymphocyte migration, we conclude that their consistent absence in IL may contribute to its intravascular and disseminated distribution pattern. [2000]








Lack of CD 29 (beta1 integrin) and CD 54 (ICAM-1) adhesion molecules in intravascular lymphomatosis. [2000]



OBJECTIVE: The aim of the study was to evaluate the effect exerted by [terfenadine](#) and [lexoterenadine](#) on adhesion molecules expression ([CD54](#) , [ICAM-1](#) , and [CD29](#) ) of a human continuously cultured conjunctival epithelial cell line (WK) and a [fibroblast cell line](#) (HEL). [1998]




Flow cytometric analysis indicated a strong need to investigate for novel cell-surface characteristic markers of BMSCs because there was no obvious difference in the expression of the selected characteristic BMSC cell surface markers [CD29](#) , [CD44](#) , [CD90](#) , [CD105](#) , and [CD166](#)  between fast-growing and slow-growing clones. [2007]





The intensity of [CD29](#)  and expression of [ICAM-1](#)  also increased on both [CD4+CD45RO+](#) and [CD8+CD45RO+](#) cells after culture with the CMV antigen. [1995]

Inclusion of an inhibitor of [protein glycosylation](#) and [exocytosis](#) ( [Brefeldin A](#)) at all stages of separation partially prevented an increase in the percentage of DCs bearing [CD18](#) , [C29](#) and [C54](#) whereas the inclusion of [cycloheximide](#) (an inhibitor of polypeptide synthesis) interfered with increases in the percentage of cells bearing [CD29](#)  and [CD54](#) . [1997]





[Flow cytometry](#) analysis revealed that the adherent fibroblast-like cells were consistently positive for [CD29](#) , [CD44](#) , [CD105](#) , and [CD166](#) , and were negative for [CD14](#) , [CD34](#) , and [CD45](#) . [2007]







Quantification of the common [leukocyte](#) beta2-integrin subunit ([CD18](#) ) and the common [leukocyte](#) beta1-integrin subunit ([CD29](#) ) as well as blocking with anti-CD18 antibodies revealed no differences between PBMC adhering alone or in company of [granulocytes](#) to HDMEC. [1998]








Addition of both anti-[CD18](#)   and anti-[CD29](#)  mAb have an additive blocking effect; both ligand pairs may participate in MNL adhesion to neural cells, reminiscent of the multiplicity of ligands used by MNL when binding to [endothelium](#). [1992]









ATSC expressed [CD29](#) , [CD44](#) , [CD90](#) , [CD105](#)  and were absent for HLA-DR and [c-kit](#) expression. [2004]





These cells also expressed the [mesenchymal stem cell](#) ([MSC](#) ) markers [CD29](#)  and [CD44](#) . [2007]






RESULTS: [Flow cytometry](#) analyses showed that in our population more than 90% of cells were positive for MSC markers: [CD29](#)  (95%), [CD44](#)  (90%), [CD73](#)  (95%), [CD90](#)  (98%). [2005]

Cells were isolated and characterized using [flow cytometry](#) by surface expression of [CD105](#) , [CD166](#) , [CD29](#) , [CD44](#) , [CD14](#) , and [CD34](#) . [2005]

Also, the [flow cytometry](#) analysis showed that ADSCs expressed high levels of stem cell-related antigens ([CD13](#) , [CD29](#) , [CD44](#) , [CD105](#) , and [CD166](#) ) , while did not express hematopoiesis-related antigens [CD34](#) , and [CD45](#) , and human [leukocyte](#) antigen HLA-DR was also negative. [2008]

Cell surface antigen expression of pMSC was similar to [bone marrow](#) MSC (bMSC) with lack of the haematopoietic and common [leukocyte](#) markers ([CD34](#) , [CD45](#) ) , and expression of adhesion ([CD29](#) , [CD166](#) , [CD44](#) ) and [stem cell](#) ([CD90](#) , [CD105](#) , [CD73](#) ) markers. [2007]

These cells exhibit [mesenchymal stem cell](#) ([MSC](#) ) surface markers, including [CD29](#) , [CD44](#) , [CD105](#) , and platelet-derived growth factor receptor- $\alpha$ . [2006]

The blood was incubated with neutralizing monoclonal antibodies to [CD18](#) , [CD11a](#), [CD11b](#) , [CD29](#) , [CD49d](#) , [CD54](#) , [alpha4beta7](#), or isotype-matched control antibodies, respectively, at 4 degrees C for 30 min. [1999]

Flow cytometry analysis after *in vitro* expansion on tissue culture plastic revealed that the fibroblastic cells were positive for CD29, CD44, CD165, and CD166, and negative for CD14, CD34, CD45, and CD133. [2008]

Like normal blood *basophils*, they express the integrins, CD11b, CD18, CD29, and CD49d. [1998]

RESULTS: Surface epitope analysis revealed that T-MPCs were negative for CD14, CD31, CD34, and CD45 expression and positive for CD29, CD44, CD90, and CD105 expression, a characteristic phenotype of BM-MPCs. [2008]

At flow cytometry analysis AM-hMSCs showed an immunophenotypical profile, i.e., positive for CD135, CD73, CD29, CD44, CD166 and negative for CD14, CD34, CD45, consistent with that reported for bone marrow-derived MSCs. [2007]

In the present study, ovine *bone marrow* derived MSCs positively express cell surface markers associated with MSC such as CD29 [?], CD44 and CD166, and lacked expression of CD14, CD31 and CD45. [2009]

In a retrospective immunohistochemical study based on 27 patients with stage IV follicle center *lymphoma* (FCL) the expression of CD44standard (CD44s), LFA-1 [?] (CD11a, CD18), VLA-4 (CD49d, CD29) and ICAM-1 (CD54 [?]) was analysed on *lymphoma* cells in *bone marrow* infiltrates. [1999]

The protein markers (CD29, CD34, CD44, CD45, CD49d, HLA-DR, CD106) of *hADAS* cells were detected by flow cytometry (FCM) to identify the *stem cell*, and the *cell cycle* was examined for P20 *hADAS* cells to evaluate the safety of the subculture *in vitro*. [2007]

RESULTS: OA and NS *fibroblasts* consistently expressed CD29, CD44, CD49e, CD54, CD90 and CD106. [2005]

There was a high expression of CD90, CD29, CD44 and CD105 and variable and moderate expression of CD166 and CD106 at the start of MSC culture and at each passage during expansion. [2006]

Flow cytometry revealed that the adherent cells were consistently positive for mesenchymal stem-cell-related markers CD29, CD44, CD165 and CD166, and were negative for the haemopoietic markers CD14, CD34, CD45 and CD133 similar to bone-marrow-derived *mesenchymal stem cells*. [2007]

In their undifferentiated state, cells were CD73, CD105, CD29, CD44, HLA-ABC, CD166 positive and CD45, CD34, CD86, HLA-DR negative. [2006]

CD34+ *progenitor cells* expressed the *integrin* beta 1 chain (CD29), VLA-4 alpha (CD49d), and VLA-5 alpha (CD49e). [1993]

Analysis by flow cytometry demonstrated that pancreatic MSCs express cell surface antigens used to define MSCs isolated from *bone marrow* such as CD13, CD29, CD44, CD49b, CD54, CD90 and CD105. [2006]

Both FBS-moDC and HS-moDC were strongly positive for CD49e (alpha5-integrin) and CD29 (beta1-integrin) but negative for CD49d (alpha4-integrin). [1998]

The cells were negative for *hematopoietic* markers but positive for CD29, CD44, CD90, CD105, and CD166. [2006]

RESULTS: *Mesenchymal stem cells* expressed CD105 (4.25 +/- 0.35), CD166 (27.83 +/- 1.89), and CD29 (9.4 +/- 0.57) and were negative for CD34, CD14, and CD45. [2005]

The mesenchymal-related antigens [CD90](#), [CD29](#), [CD166](#), [CD105](#), and [CD44](#) were homogeneously detected by cytofluorimetric analysis, whereas membrane [CXCR4](#) was expressed only by a minority of cells. [2008]

They exhibited a high expression of [CD2](#), [CD18](#), [CD29](#), and [CD49d](#). [1998]

Both BCP-1 and HBL-6 cells lack expression of important cytoadhesion molecules including [CD11a](#) and [CD18](#) ([LFA1](#) [71] alpha and beta chains), [CD29](#) [71], [CD31](#), [CD44](#), [CD54](#) [71] ([ICAM-1](#) [71]), and [CD62L](#) [71] and E (L and E selectins). [1998]

In contrast to a minority of DCs in whole blood, the majority of isolated DCs expressed the [beta 2](#) integrins and there were a greater number of cells bearing [CD44](#), [CD54](#) and some of the beta 1 integrins (notably [CD49b](#), [CD49d](#), [CD49e](#) and [CD29](#)). [1997]

The expression of adhesion molecules ([LFA-1](#) [71], [ICAM-1](#), [CD29](#)) on T cells activated with cytomegalovirus (CMV) antigen was investigated by three-color flow cytometry analysis. [1995]

Similar to mesenchymal stem cells, these amnion-derived stem cells (ADSCs) express the surface markers [CD29](#) and [CD90](#), but were negative for the lymphohematopoietic markers [CD45](#) and [CD11b](#). [2008]

Lymphocyte adhesion to the retinal vessels was more dependent on [CD29](#) (the common chain of the beta 1 integrins) expression than either [CD11a/CD18](#) or [CD49d](#). [1997]

RESULTS: MSCs could be grown from 30 of 37 children; at the third-fourth passage MSCs resulted positive (> or = 98%) for [CD73](#), [CD105](#), [CD166](#), [CD29](#), [CD13](#), [CD44](#) and negative (< or = 1%) for [CD34](#), [CD45](#), [CD14](#). [2006]

There were significantly fewer cells expressing [CD11b](#), [CD18](#) and [CD25](#) in the CD64-DCp population compared with CD14- DCps, and this CD64- DCp subpopulation also had a lower expression of [CD11b](#) and [CD18](#). [2000]

These cells expressed [CD29](#) and [CD90](#) (Thy1.1) surface antigens, but not [CD31](#), [CD34](#) and [CD45](#). [2008]

We examined the effect of dibutyryl cAMP (dbcAMP) on the expression of [LFA-1](#) [71] ([CD11a/CD18](#)), Mac-1 ([CD11b](#) / [CD18](#)), and [VLA-4](#) ([CD49/CD29](#)) and on eosinophilic differentiation of a human leukemia cell line, EoL-1. [1994]

The cells were strongly positive for [CD135](#) (18.5 +/- 0.14), [CD44](#) (27 +/- 2.8), [CD165](#) (13 +/- 9), [CD29](#) (59 +/- 9.4), [CD90](#) (60 +/- 11) and consistently negative for [CD117](#) (1.2 +/- 0.1), [CD166](#) (1.1 +/- 0), [CD34](#) (1.2 +/- 0.2), [CD14](#) (1 +/- 0), and [CD45](#) (1 +/- 0), consistent with a mesenchymal lineage. [2007]

HLSCs expressed the mesenchymal stem cell markers [CD29](#) [71], [CD73](#) [71], [CD44](#), and [CD90](#) but not the hematopoietic stem cell markers [CD34](#), [CD45](#) [71], [CD117](#) [71], and [CD133](#). [2006]

These cells were positive for essential MSC surface molecules ([CD90](#), [CD105](#), [CD166](#), [CD44](#), [CD29](#)) and negative for most hematopoietic and endothelial cell markers ([CD45](#), [CD34](#), [CD11a](#), [CD235a](#), [HLA-DR](#), [CD144](#)). [2008]

Culture-expanded [CD105](#) (+) cells expressed [CD105](#), [CD44](#), [CD29](#), [CD90](#), and [CD106](#) but not [CD14](#), [CD34](#), [CD45](#), or [CD31](#) surface antigens, and these cells were able to differentiate into osteogenic, chondrogenic, and adipogenic lineages. [2006]

Immunological features of GM-490 cells, a new blood cell line from a patient with acute lymphoblastic leukemia, included lack of [CD34](#), [CD38](#), [CD45](#), [CD14](#), [HLA-DR](#), and lymphoid and myeloid markers and expression of [CD29](#), [CD36](#), [CD44](#), [CD34](#), [CD71](#), [CD105](#), and [CD133](#). [2006]



[illegible]



EBU.65+, CD4+ T cells had low levels of expression of CD45RO, CD29, CD54, and CD58, and had high levels of CD45RA antigen. [1991]

Freezing markedly reduced the fraction of CD34+ cells with L-selectin (CD62L) expression from 62 to 11% and also diminished the fluorescence intensity for the integrin subunits CD29 and CD49d on CD34+ cells. [1998]

The CD4,CD45RO, or memory T-cell, subset was numerically normal but expressed increased levels of adhesion markers (CD29, CD54, and CD58). [1993]

Comparison of chronic lymphocytic leukemia and marginal B-cell lymphoma showed that the former presented a higher expression of CD49c and a lower expression of CD11a, CD11b, CD18, CD49d, CD29, and CD54. [2006]

These cells, through flow cytometry analysis, were mainly positively marked for five mesenchymal stem cell antigens (CD29, CD90, CD105, SH3, and SH4), while negative for hematopoietic cell markers, CD14, CD34, CD45, and CD117, and for endothelial cell marker, CD31. [2008]

Stromal cell-associated markers (CD13, CD29, CD44, CD63, CD73, CD90, CD166) were initially low on SVF cells and increased significantly with successive passages. [2006]

RESULTS: Isolated corneal keratocytes exhibited a fibroblastoid morphology and expressed CD13, CD29, CD44, CD58, CD73, CD90, CD105 and CD133, but were negative for HLA-DR, CD34, CD117 and CD45. [2007]

Mononuclear cells collected from the menstrual blood contained a subpopulation of adherent cells which could be maintained in tissue culture for >68 doublings and retained expression of the markers CD9, CD29, CD41a, CD44, CD59, CD73, CD90 and CD105, without karyotypic abnormalities. [2007]

Flow cytometry analyses and immunocytochemistry stain showed that placental MSC was a homogeneous cell population devoid of hematopoietic cells, which uniformly expressed CD29, CD44, CD73, CD105, CD166, laminin, fibronectin and vimentin while being negative for expression of CD31, CD34, CD45 and alpha-smooth muscle actin. [2005]

Flow cytometry analysis revealed that CD29, CD44, CD95, CD105 and HLA-I were expressed on the cell surface, but there was no expression of hematopoietic lineage markers, such as CD34, CD38, CD71 and HLA-DR. [2008]

Analysis of 10 surface molecules, CD11a, CD18, CD29, CD49d, CD49e, CXCR-4, CD62L, CD31, CD43, and CD44 over a 5-day culture period showed that their expression levels were either maintained or up-regulated on CD34(+) cells and the primitive Thy-1(+) subset. [2001]

CsA was found to have no effect on keratinocyte expression of CD29, CD58 or CD11b and c. The persistence of CD54 on vascular endothelium and of adhesion molecule expression on keratinocytes, despite resolution of the skin lesions, may explain the universal and rapid recurrence of psoriasis on cessation of CsA administration. [1991]

RESULTS: Upon culture, UC-MSCs express a defined set of cell surface markers (CD29, CD44, CD73, CD90, CD105, CD166, and HLA-A) and lack other markers (CD45, CD34, CD36, CD117, and HLA-DR) similar to BM-MSCs. [2008]

All clones expressed CD3, CD2, CD18 and CD29. [1992]

In addition, mAb to the adhesion molecules [LFA-3](#), [CD2](#), [LFA-1 \[7\]](#), [CD29](#), and to the [tyrosine phosphatase CD45](#) also inhibited proliferation, indicating the involvement of T to T cell interactions. [1991]

Flow cytometric analysis showed that fetal lung MSCs expressed [CD13](#), [CD29](#), [CD44](#), [CD90](#), [CD105](#), [CD166](#), and HLA-ABC, but not [CD14](#), [CD31](#), [CD34](#), [CD38](#), [CD41a](#), [CD42b](#), [CD48](#), [CD49d](#), [CD61](#), [CD106](#), [CD133](#), and HLA-DR. [2005]

Young HMEC until P11 demonstrated a nearly 100% expression of distinct adhesion molecules such as [CD24](#), [integrin beta1](#) ([CD29](#)) and [CD44](#) similar to the human mammary tumor cell line MCF-7. [2008]

Surface analyses indicated higher percentages of [CD49d](#) ( $\alpha 4$ )<sup>+</sup> and [CD29](#) ( $\beta 1$ )<sup>+</sup> [CD4 T lymphocytes](#) in adherent cells, but less of a differential in [CD49](#) ( $\alpha 4$ )<sup>+</sup> and no difference in [CD29](#) ( $\beta 1$ )<sup>+</sup> [B lymphocytes](#). [1994]

We used [flow cytometry](#) to examine the cells' expression of [CD29](#), [CD31](#), [CD45 \[7\]](#), [CD34](#), [CD44](#), [CD144](#), [CD146](#), [Flk1 \[7\]](#), and [Sca-1](#). [2006]

The expressions of the [CD36](#) gene and the VLA-4-integrin subunit genes, [CD49d](#) ( $\alpha$ -subunit) and [CD29](#) ( $\beta$ -subunit), were compared in the [reticulocytes](#) of steady-state SCA patients and patients on HUT using real-time PCR. [2007]

Accordingly, [flow cytometry](#) demonstrated that [reticulocytes](#) from patients on HUT had significantly lower [CD36](#) and [CD49d](#) surface expressions ( $P < 0.01$ ) and, importantly, significantly lower expressions of the [CD36](#), [CD49d](#) and [CD29](#) genes ( $P < 0.05$ ) than [reticulocytes](#) of SCA patients not on HUT. [2007]

In contrast, [LFA-1 \[7\]](#)- and [VLA-5/CD29](#)-specific antibodies did not have an additive blocking effect on [CD4 T cell](#) adhesion, suggesting that efficient adhesion requires a competitive association of integrins with [cytoskeleton](#) elements. [1994]

The possibility of administration of loaded cell culture was verified and comparative analysis of the [phenotype](#) of [mesenchymal stem cells](#) by the expression of [fibronectin](#), [nestin](#), [CD13](#), [CD29](#), [CD34](#), [CD44](#), [CD54](#), [CD60](#), [CD105](#), [CD106](#), HLA-ABC, HLA-DR, and [PCNA](#) was carried out. [2008]

Results: The hUCMSCs were positive for the human MSC-specific markers [CD13](#), [CD29](#), [CD44](#), [CD105](#) and nerve growth factor receptor, but negative for the haematopoietic lineage markers [CD31 \[7\]](#), [CD34](#), [CD38](#), [CD45](#) and HLA-DR. [2009]

Antibodies against [VLA-4](#), [CD29](#), and [LFA-1](#) also inhibited the induced [IL-6](#) secretion in plasma cell-LTBMCC cocultures. [1994]

The re-epithelialization markers [integrin alpha3](#) and skin-derived antileucoprotease were remarkably increased with the presence of [bFGF \[7\]](#) in a dose-dependent manner, while the mesenchymal cell surface markers [CD29 \[7\]](#) and [CD44](#) were downregulated in a time-dependent manner. [2005]

Analysis of the beta 1 [integrin](#) subfamily ([CD29](#), [CD49b](#), [CD49d](#), [CD49e](#), and [CD49f](#)) showed no significant change, except that [CD49e](#) was significantly decreased on the HTLV-infected cell lines. [1995]

Nineteen mAbs specific for [CD11a](#) (1), [CD14 \[7\]](#) (3), [CD18](#) (1), [CD21](#) (1), [CD29](#) (2), [CD44](#) (2), [CD47](#) (3), [CD48d](#) (1), [CD172a](#) (1), [CD45RB](#) (1), [CD61](#) (1), [RACT48A](#), and [GBSP71A](#) reacted with goat LDA. [2007]

This study described the distribution, pattern and intensity of cytokine TGF $\alpha$ , adhesion molecules [CD 34](#) and [CD 44](#) and integrins  $\alpha 2$ ,  $\alpha 3$ , [CD 29](#) (beta 1 chain) and [CD 61](#) (beta 3 chain) in [hepatocellular carcinoma \(HCC\)](#), metastatic liver tumors and [hepatic cirrhosis](#). [1995]

Finally, comparison of [mantle-cell lymphoma](#) and marginal [B-cell lymphoma](#) showed that marginal [B-cell lymphoma](#) had a higher expression of [CD11a](#), [CD11c](#), [CD18](#), [CD29](#), and [CD54](#). [2006]

The circulating [monocytes](#) also displayed a steady increase in membrane expression [upregulation](#) of [ICAM-1](#), [CD29](#), [CD11b](#), and [CD11c](#). [1996]

When monoclonal antibodies that specifically block the interaction of these integrins with their ligands were used, we observed that [CD29](#) is only involved in adhesion and [CD11b](#) only [in migration](#), whereas [CD11a](#) participates in both processes. [2000]

Phenotypically, MSCs can be defined with a minimal set of markers as [CD31](#)-, [CD34](#)-, and [CD45](#)-negative cells and [CD13](#)-, [CD29](#)-, [CD73](#)-, [CD90](#)-, [CD165](#)-, and [CD166](#)-positive cells. [2007]

FhIPR and FhIPR-G(s)alpha distribution was similar to that of transmembrane [plasma membrane \(PM\)](#) markers ([CD147](#), [MHC1](#), [CD29](#), [Tata1](#), the alpha subunit of Na,K-ATPase, transmembrane form of [CD58](#) and [CD44](#)). [2004]

For H9 cells, intracellular filamentous actin formation and the cell surface expression of [CD3](#), [CD11a](#), [CD25](#), [CD26](#), [CD44](#), [CD29](#) were measured by using [flow cytometry](#). [2004]

Of the cluster designations tested, [CD29](#), [CD49d](#), [CD51](#) and [CD61](#) were strongly expressed on HBMSC. [2002]

RESULTS: [hMSC](#) express the relative specific antigens of MSC, such as [SH2](#), alpha-smooth actin, [CD29](#), [CD44](#), [CD90](#) and [S100](#). [2006]

[Beta 2 \(CD18\)](#) and beta 1 ([CD29](#)) [integrin](#) mechanisms [in migration](#) of human polymorphonuclear leucocytes and [monocytes](#) through lung [fibroblast](#) barriers: shared and distinct mechanisms. [1997]

RESULTS: [Coronary reperfusion](#) down-modulated [monocyte](#) molecules expression, especially for [CD18](#) (P = 0.048), [CD44](#) (P = 0.0035), [CD49d](#) (P = 0.0029), [CD29](#) (P = 0.032), [HLA-DR](#) (P < 0.0001), [TLR-4](#) (P = 0.0109), [CCR2](#) (P = 0.0184), [CCR5](#) (P = 0.0396), and [CX3CR1](#) (P < 0.0001). [2005]

Activation markers such as [CD25](#), [HLA-DR](#), [CD29](#) and adhesion molecules ([ICAM-1](#) and [LFA-3](#)) were clearly elevated in this group in comparison to 40 healthy volunteers. [1993]

Surface expression of the beta-2-integrin chains ([CD11a](#), [CD11b](#), [CD11c](#) and [CD18](#)), and the beta-1-integrin chains ([CD49b](#), [CD49d](#), [CD49f](#) and [CD29](#)), as well as that of members of the immunoglobulin superfamily ([CD2](#), [CD54](#), [CD58](#) and [CD58L](#)), were analyzed by one- or two-color [flow cytometry](#). [1995]

Only a minor impact on other cell surface receptors ([CD29](#), [CD58](#) and [CD54](#)) was noted. [2006]

These antibodies were directed against [CD29](#) (MEM101A, [K20](#)) and [CD18](#) (BU87, 7E4), the common beta1- and beta2-integrin subunits respectively. [1999]

The other adhesion molecules studied remained steady ([CD11b](#), [CD49d](#), [CD49e](#), [CD29](#), [CD28](#), and [CD62L](#)). [1994]

In cases of low to medium extent of endothelialization, the adherence of [monocytes](#) and [granulocytes](#) was mediated by the expression of [CD166](#), [CD29](#) and [CD11a](#) (alpha-L [integrin](#)), [CD29](#), [CD31](#) ([PECAM-1](#)), respectively. [2003]

We isolated an adherently growing population of HUCB-derived cells expressing [CD13](#), [CD29](#), [CD49e](#), [CD71](#), [CD73](#), [CD166](#), [Flk-1](#), and [vimentin](#) [?] but lacking [CD34](#) and [CD45](#). [2005]



These cells were found to express [CD29](#), [CD44](#), [CD90](#), [CD95](#), [CD105](#), [CD166](#), and MHC class, but not [CD14](#), [CD34](#), [CD46](#), [CD45](#), [CD69](#), [CD86](#), [CD117](#), [CD152](#), or MHC class II. [2005]



top

MATERIALS AND METHODS: Changes in [CD29](#), [CD54](#), [annexin V](#) binding and GSH levels were examined using FITC-conjugated antibodies or [fluorescence](#) probes and flowcytometry. [2000]



These hemangioma-derived MSCs (Hem-MSCs) are similar to MSCs obtained from human [bone marrow](#), expressing the cell surface markers [SH2](#) ([CD105](#)), [SH3](#), [SH4](#), [CD90](#), [CD29](#), [smooth muscle alpha-actin](#), and [CD133](#) but not the [hematopoietic](#) markers [CD45](#) and [CD14](#) or the [hematopoietic/endothelial](#) markers [CD34](#), [CD31](#), and [kinase insert domain receptor](#) ([KDR](#)). [2006]



Moreover, Entamoeba-induced ROS generation in [neutrophils](#) was inhibited by mAbs against [CD18](#) [?] or [CD11b](#), but not by mAbs against [CD11a](#), [CD11c](#), or [CD29](#). [2007]



The present report describes the induction of aggregation of [Jurkat cells](#) by antibodies to alpha 5 ([CD49e](#)) and to a lesser extent by antibodies to the common beta 1/[CD29](#) [?] chain of these integrins. [1991]



RESULTS: FACS analysis indicated that [EpCAM](#) +ve cells were positive for [CD29](#), [CD49f](#), [CD90](#), [CD34](#), HLA class I, albumin and [AFP](#) but negative for HLA class II (DR) and [CD45](#). [2008]



In addition, [CD4](#), [CD8](#), [CD29](#), [CD45RO](#) expression on peripheral [CD3\(+\)](#) T cells were studied using [flow cytometry](#). [2002]



A stromal marrow cell (SMC) population expressing the markers [CD68](#), [CD29](#), [CD13](#), and [CD54](#) was identified. [2001]



[Ionizing radiation](#) caused an [up-regulation](#) of the cell surface expression of intercellular adhesion molecule-1 ([ICAM-1](#)) and integrins [beta1](#) ([CD29](#)), [alpha2](#) ([CD49b](#)), [alpha5](#) ([CD49e](#)) and [alpha6](#) ([CD49f](#)) in [keratinocytes](#), which was inhibited by [1alpha,25\(OH\)2D3](#). [2006]



METHODS: Immunohistochemical study was used to evaluate the expression of molecular mediators, [bone morphogenetic protein 4](#) ([BMP-4](#)), [beta-catenin](#), [osteopontin](#), [osteonectin](#) and [osteocalcin](#), and cell markers, [smooth muscle actin](#), [CD29](#) and [CD44](#). [2008]



We have studied the post-injury expression of the [lymphocyte](#), [monocyte](#) and [neutrophil](#) adhesion molecules [CD11a](#) ([LFA-1](#) [?]), [CD11b](#), [CD11c](#), [CD29](#) ([beta-1 integrin](#)) and [CD62L](#) ([L-selectin](#)) in a group of 36 trauma patients, 13 of whom had suffered major trauma (ISS > or = 16), 15 moderate trauma (ISS = 9-15) and eight minor trauma (ISS < 9). [1997]



[BGM](#) mAb, an [IgG3](#) precipitating a 70 kDa structure from HUVEC, was able to induce [endothelial cells](#) to secrete amounts of IL-6 significantly higher than irrelevant controls or mAb binding different endothelial antigens (i.e. [CD31](#), [CD29](#) [?], [ICAM-1](#) [?] and HLA class I). [1998]



The percentage of [lymphocytes](#) bearing the adhesion molecules [CD49d](#), [CD29](#) and [CD62L](#) was increased in [MS](#) blood, but the level of [CD29](#) and [CD62L](#) expression was reduced. [1996]



In the binding assays, the numbers of FDCs bound to [fibronectin](#) and laminin-coated dishes and LF of cryostat sections of human [tissues](#) were reduced markedly by pretreatment with monoclonal antibodies against [CD29](#), [CD49e](#), and [CD49f](#). [1996]

SAG-induced death of primed [T cells](#) was also inhibited by monoclonal antibodies (mAb) directed at the [CD11a/CD18](#) molecule but not those reactive with other [T cell](#) surface molecules such as [CD2](#), [CD7](#), [CD23](#), [CD29](#) or [CD49d](#). [1993]

The expression of the beta subunit of the [beta2](#) integrins ([CD18 \[?\]](#)), but not that of beta1 integrins ([CD29](#)), was increased during 24-h RA treatment. [2000]

Moreover, several integrins ([CD11b](#), [CD11c](#), [CD18 \[?\]](#), [CD41a](#), [CD61](#) and [CD29](#)) were also found. [1997]

Immunofluorescent staining of [cells cultured](#) on [fibronectin](#) showed the 100 kd protein coinciding with the [fibronectin receptor beta subunit](#) in sites of substrate contact. [1989]

The beta subunit of the human [fibronectin](#) receptor ([FNRB](#)) is a transmembrane protein belonging to the VLA (very late antigens of activation) family. [1989]

A cDNA clone of the beta subunit of human [fibronectin](#) receptor ([FNRB](#)) detects two different polymorphic loci: (a) a codominant system previously mapped to the pericentromeric region of [chromosome 10](#), the site of the functional [FNRB](#) gene; and (b) a dominant system not linked to the first one or to any [chromosome 10](#) marker tested. [1990]

Intracellular tyrosin-phosphorylation induced by [fibronectin](#) by [CD29](#) stimulation in H9 cells was analyzed by [immunoblotting](#). [2004]

Twenty three mAbs specific for [CD7](#) (1), [CD9](#) (2), [CD11a](#) (1), [CD14 \[?\]](#) (3), [CD18](#) (4), [CD29](#) (1), [CD32 \[?\]](#) (1), [CD44](#) (1), [CD47](#) (4), [CD49d](#) (2), [CD50](#) (1), [CD60](#) (1), [CD172a](#) (1), and GBSP71A reacted with [Hama LDA](#). [2007]

Moreover, the influence of chemotactic agonists on the adhesion properties as well as the quantitative expression of [CD29](#), [CD11b/CD18](#) and [CD61](#) was analysed by [flow cytometry](#). [1996]

[Lymphocytes](#) adhere to [fibronectin](#) ([FN](#)) via multiple receptors of the VLA ([beta 1](#), [CD29 integrin](#)) family. [1991]

These cells were identified with the epithelial markers, including [alpha-fetoprotein](#) ([AFP](#)), albumin ([ALB](#)), cytokeratins ([CK](#)) 7, and [CK18](#), as well as the mesenchymal markers, such as alpha-smooth muscle actin ([ASMA](#)), [CD29](#), [CD44](#), [CD49](#), [CD54](#), collagen I and osteopontin ([OPN](#)). [2005]

Concomitantly, Mabs against [CD63](#) and [CD82](#) diminished the surface expression of [CD29](#), [CD11b](#), [CD18](#), and alpha5 integrins. [2004]

The surface density of [CD29](#) on CD45RO bright LP-T corresponded to that of CD45RO negative PB-T, and a significant proportion of CD45RO bright LP-T was even negative for [CD11a/CD18](#) and [CD29](#). [1992]

TLC from both panels showed similar levels of expression of TCR alpha/beta, [CD4](#), [CD2](#), [CD25](#), and [CD29](#) and recognized nickel in association with class II HLA molecules with restriction determinants in HLA-DR, HLA-DP, and HLA-DQ. [1992]

We studied the expression of various cell surface molecules ([CD25 \[?\]](#), [CD28](#), [CD29](#), [CD45RO](#), [CD56](#), [LFA-1](#), [VLA-4](#)) on peripheral blood CD4+ T-cells in 6 [relapsing-remitting multiple sclerosis](#) (RR-MS) patients. [1996]

The heterogeneity of [CD31 antigen](#) expression by CD4-positive cells was further examined by dual-labelling of purified CD4 cells with mAb B2B1 and CD45RA or CD29 mAb which identify naive and memory [T cells](#) respectively. [1991]

We then asked whether the corresponding [integrin](#) adhesive counter receptors [lymphocyte function-associated antigen-1](#) (CD11a/[CD18](#)), macrophage-1 antigen (CD11b/[CD18](#)), p150,95 (CD11c/[CD18](#)), and very late activation antigen-4 (CD49/[CD29](#)) are increased in patients with [preeclampsia](#). [1997]

METHODS: By means of [flow cytometry](#) analysis, we evaluated [ICAM-1](#) and [CD29](#) expression by WK and HEL [epithelial cells](#) in basal condition (at baseline) or after [IFN gamma](#) or [TNF alpha](#) stimulation in the presence or in the absence of [terfenadine](#) and [loxofenadine](#). [1998]

Other markers were only occasionally found ([CD4](#), [CD11b](#), [CD29](#), [CD32](#) [7], and [CD54](#)), and the remaining above antigens were not expressed. [1997]

Here, we show that spheroid cultures of these colon CSCs contain expression of [CD133](#), [CD166](#), [CD44](#), [CD29](#), [CD24](#) [7], [Lgr5](#), and nuclear [beta-catenin](#), which have all been suggested to mark the (cancer) [stem cell](#) population. [2008]

Cell contact-dependent costimulation of [NK cells](#) does not appear to involve known receptors that can costimulate [T cells](#), including [CD22](#), [CD27](#), [CD28](#), [CD29](#), or [LFA-1](#) [7]. [1996]

Variable numbers of cells of each of the clones expressed Ag identified by mAb 4B4 ([CD29](#)), [Leu 8](#), [Leu 15](#) ([CD11b](#)), and [NKH1](#). [1988]

Of these [glycoprotein](#) receptors, [CD45](#) and [CD71](#), but not [CD29](#) and [CD43](#), appear to be involved in [selectin-3](#)-induced [T cell](#) death. [2006]

Consistent with previous reports on tissue-derived [mast cells](#), those derived from foetal liver *in vitro* expressed [HLA class I](#), [CD9](#), [CD29](#), [CD33](#), [CD43](#), [CD45](#) and [Kit](#). [1993]

The following parameters were studied: surface molecules expression ([CD18](#) [7], [CD11b](#), [CD44](#), [CD162](#), [CD15s](#), [CD38](#), [CD86](#), [CD16](#), [CD49d](#), [CD29](#), [CD25](#), [HLA-DR](#), [Toll-like receptor-4](#) [[TLR-4](#)], [CXCR1](#), [CCR2](#), [CCR5](#), [CX3CR1](#)), [oxidative burst](#) response, monocyte-platelet conjugates (using antibodies against [CD45](#), [CD14](#), [CD41a](#)), and [platelet activation](#) ([CD62P](#), [PAC-1](#)). [2005]

RESULTS: HGMC were found to react with antibodies against [CD29](#), [CD33](#), [CD44](#), [CD45](#), [CD47](#), [CD54](#), [CD55](#), [CD58](#), [CD63](#), [CD117](#), [CD147](#), [CD151](#), [CD172a](#), and [CD203c](#). [2005]

Serum LDH was elevated to 3,990 u/l. The T-CLL cells coexpressed antigens detected by MAbs [CD22](#), [CD3](#), [CD4](#), [CD5](#), [Ti](#) (ToR alpha/beta; WT31) [CD45](#) and [CD45RA](#), but did not express any other antigens including [CD1](#), [CD8](#), [CD29](#), and [TCR gamma/delta](#), [Ti gamma A](#) and [TQ-1](#). [1993]

The spectrum of phenotypic markers in PSCs was investigated; a similarity was revealed when using human bone marrow-derived [stem cells](#) as the comparative experiment, such as [CD29](#), [CD44](#), [CD49](#), [CD58](#), [CD51](#), [CD62E](#), [PDGFR](#)-alpha, [CD73](#) (SH2), [CD81](#), [CD105](#) (SH3). [2006]

Both OCs and FBGCs expressed the alpha-chains of the [vitronectin receptor](#) ([CD51](#)) and of the [VLA-2](#) (CDw49b) and [VLA-4](#) (CDw49d) molecules as well as their respective beta-chains, [gpIIb](#) ([CD61](#)) and [CD29](#). [1991]

The [cell adhesion](#) receptors [GPVI](#) [7] ([CD36](#)) and [integrin alpha](#) 4 beta 1 ([CD49d](#)/[CD29](#)) were previously identified on circulating sickle [reticulocytes](#), and shown to mediate sickle RBC adhesion to the [endothelium](#). [1996]

- These [mast cells](#) and the other cell types present also adhere spontaneously to [fibronectin](#) and to laminin, this adhesion being partially inhibited by antibodies against [CD61](#) and [CD29](#) integrins. [1995]
- CD45RO bright LP-T were also bright for [CD2](#) and [CD58](#) but had significantly reduced surface densities of [CD11a](#)/[CD18](#) and [CD29](#) compared with CD45RO bright PB-T. [1992]
- CD45RO bright [T cells](#) from the peripheral blood (PB-T) were predominantly bright for [CD2](#), [CD58](#), [CD29](#), and [CD11a](#)/[CD18](#) whereas CD45RO dim PB-T had bimodal expression profiles and CD45RO negative PB-T were dim or even negative for these Ag. [1992]
- Very-late antigen (VLA)-4([CD49d](#)/[CD29](#)) constitutes the only member of the beta 1 [integrin](#) family that plays a role in the interaction of [lymphoid cells](#) with both [extracellular matrix](#) and [endothelial cells](#) through two identified ligands: [fibronectin](#) ([FN](#)) and [VCAM-1](#), respectively. [1991]
- The recognition of equine [lymphocyte](#) antigens by monoclonal antibodies (mAbs) directed against human [CD11a](#), [CD18](#), [CD21](#), [CD23](#), [CD29](#) and DR, as well as mouse [CD23](#) was studied by [flow cytometry](#). [2003]
- Six markers ([CD16](#) [7], [CD29](#), [CD33](#), [CD35](#), [CD44](#), [CD71](#), and HLA-DQ) remained unchanged. [2002]
- With regard to the [integrin](#) family, [monocytes](#) expressed beta 1 ([CD29](#)), alpha 4, alpha 5, alpha 6, beta 2 ([CD13](#) [7]), [CD11a](#), [CD11b](#), and [CD11c](#) subunits, but not alpha V ([CD51](#)). [1994]
- Array data showed that both hbmMSC and hpMSC expressed mRNA for the [cell adhesion](#) molecules [CD54](#) ([ICAM-1](#)), [E-cadherin](#), [CD166](#) ([ALCAM](#)), [CD56](#) ([NCAM](#)), [CD106](#) ([VCAM-1](#)), [CD49a](#), b, c, e and f (integrins [alpha1](#), 2, 3, 4 and 6), [integrin alpha11](#), [CD51](#) ([integrin alphaV](#)), and [CD29](#) (integrins beta1). [2008]
- Accumulating evidence suggests that the [VLA/CD29](#) molecule plays an important role in [T-cell](#) costimulation, and [CD4](#)+[CD29](#)/[VLA](#)+ memory [T cells](#) play a key role in induction of [CD8](#) killer effector [T cells](#) which are considered to be a major population involved in [graft rejection](#). [1996]
- Expression of the [CD29](#), [CD49b](#) and [CD31](#) adhesion molecules on the platelet surface was unaffected by storage in Diatube-H. [1995]
- Expression of markers for hepatic progenitors such as albumin, [alpha-fetoprotein](#) ([AFP](#)), [CD29](#) ([integrin beta1](#)), [CD481](#) ([integrin alpha6](#)) and [CD99](#) (Thy 1) was studied by using [flow cytometry](#), [immunocytochemistry](#) and [RT-PCR](#); HLA class I (A, B, C) and class II (DR) expression was studied by [flow cytometry](#) only. [2008]
- Large [focal adhesions](#) containing aggregates of [ITGA5](#), [ITGA4](#), [ITGA5](#), [ITGB1](#), [ITGB5](#) [7], [ACTN](#) and [PTK2](#) were detected in interplacentomal LE and Tr of only gravid uterine horns and increased during pregnancy. [2008]
- Antibodies to the integrins [CD11a](#) and [CD29](#) or to the glycolipid-anchored proteins [CD14](#) and [CD35](#) also had no effect. [1995]
- AG-F [cell line](#) demonstrated an unusual [phenotype](#), lacking surface [CD2](#) and [CD3](#), but expressing high levels of [CD4](#), [CD5](#), [CD7](#), [CD29](#) [7], and [CD45RO](#). [1993]
- The formation of these processes is shown to require the interaction between the beta1-integrin ([CD29](#)) on the surface of the DCs and [fibronectin](#) in the [extracellular matrix](#). [2006]



Whereas expression of HLA class I, HLA-DR, intercellular [cell adhesion molecule-1](#), and [CD29](#) was distributed homogeneously within a patient's serial sections, immunoreactivity of [vascular cell adhesion molecule-1](#), [lymphocyte function antigen-3](#), and the selectins was accentuated on single vascular endothelia. [1999]

In turn, cells with the mesenchymal [phenotype](#) displayed a fibroblast-like morphology and expressed several MPC-related antigens ([SH2](#), [SH3](#), [SH4](#), [ASMA](#), [MAB 1470](#), [CD113](#), [CD29](#) and [CD49e](#)). [2000]

In contrast to [CD56bright+](#) PBNC cells, DLGL were still brighter for [CD55](#) and show higher expression for [CD29](#) and [CD45RO](#). [1997]

The DNA markers, [RBP3](#) (retinol-binding protein 3, interstitial) and [FNRB](#) (fibronectin receptor, beta polypeptide), are both tightly linked to the [MEN2A](#) locus, and are localized to opposite sides of the [MEN2A](#) locus. [1991]

FACS analyses and immunostaining showed the mesenchymal characteristics of these cells by positive staining for [fibronectin](#), [vimentin](#), [CD49E](#), and [CD29](#). [2006]

Our results indicate that 15 anti-human [CD9](#), [CD19](#), [CD14 \[7\]](#), [CD20 \[7\]](#) (two clones), [CD22 \[7\]](#), [CD25 \[7\]](#), [CD29 \[7\]](#) (two clones), [CD32 \[7\]](#), [CD47 \[7\]](#) (two clones), [CD49d](#), [CD49e](#), and [CD86](#) mAbs exhibit clear cross-reactivity with [guinea pig](#) splenocytes. [2007]

These [stromal cells](#) displayed a new [phenotype](#) with positive immunostaining for [CD9](#), [CD19](#), [CD29](#), [CD146](#), [CD166](#) and [Multi drug resistance](#) protein. [2008]

[Thymus](#) samples of animals treated with 1 and 10ng/kg were additionally analysed by [Western blotting](#) for [ECM](#) proteins, transforming growth factor-beta(1) (TGF-beta(1)) and [integrin](#) chain content ([CD49a](#), [CD49e](#), [CD49f](#) and [CD29](#)). [2006]

The quantitative levels of [CD11b/CD18](#), but not [CD29](#) and [CD61](#), was increased by fMLP, but not [RANTES](#) nor [IL-8](#). [1996]

METHODS: Flow cytometric analysis of [CD3](#), [CD19](#), [CD56/CD16 \[7\]](#), [CD4](#), [CD8](#), [CD4/CD29](#), [CD4/CD45RA](#), [CD4/CD45RO](#), [CD8](#), [CD28](#), [CD3/CD69](#) [lymphocyte](#) subsets isolated from [third trimester decidua](#) of pregnant with [preeclampsia](#) (n=21) and pregnant controls (n=11) subjected to elective [caesarean sections](#). [2003]

We studied the changes in expression of [CD9](#) and beta1-integrins ([CD29](#), [VLA](#)) in human [vascular smooth muscle cells](#) (VSMCs) under [in vitro](#) culture conditions mimicking proliferative [vascular diseases](#). [1998]

The most significant phenotypic difference between ATL cells and CTCL cells was the expression of [Lau8](#) ([lymph node homing receptor](#)), [CD7](#) and [CD25](#) antigens on the cell surface, and the main phenotypic difference between skin-infiltrating ATL and CTCL cells and peripheral blood and [lymph node](#) ATL cells was the expression of [CD29](#) and [CD45RA](#). [1990]

Animals were hysterectomized on Days 40, 80 or 120 of pregnancy and [uteri](#) immunostained for integrins ([ITGAV](#), [ITGA4](#), [ITGA5](#), [ITGB1](#), [ITGB3](#) and [ITGB5 \[7\]](#)), [ECM](#) proteins ([SPPI](#), [LGALS15](#), [FN](#) and [VTN](#)), cytoskeletal proteins ([ACTN](#) and [TLN1](#)), and signal generator ([PTK2](#)). [2008]

NKL cells express [CD2](#), [CD6](#), [CD11a](#), [CD26](#), [CD27](#), [CD29](#), [CD38](#), [CD43](#), [CD58](#), [CD61](#), [CD84](#), [CD95](#), [class II MHC](#), and the C17.1 antigen, but do not express detectable levels of [CD3](#), [CD4](#), [CD5](#), [CD8](#), [CD14](#), [CD19](#), [CD20](#), [CD28](#), [alpha/beta](#) or [gamma/delta T cell](#) receptors on the cell surface. [1996]

Neutralizing antibodies reactive with either [alpha 4](#), [VCAM-1](#), or [CD29](#) were all equally capable of inhibiting the binding of activated [leukocytes](#) to mesothelial cells (in the presence of anti-CD18 antibody). [1994]

By means of [dissection/proteinase](#) digestion techniques, high numbers of viable mononuclear cells were harvested from human placenta at term, and a mesenchymal cell population with characteristic expression of [CD9](#), [CD29](#), and [CD73](#) was obtained in culture. [2004]

RA-NLC constitutively expressed [CD29](#), [CD45c](#), [CD54](#) ([ICAM-1](#)), [CD105](#) ([VCAM-1](#)), [CD157](#) ([BST-1](#)), and class I [MHC](#) molecules, and secreted IL-6, IL-7 [?], IL-8, granulocyte-macrophage colony-stimulating factor ([GM-CSF](#)) and granulocyte colony-stimulating factor ([G-CSF](#)). [1998]

The expression of intracellular [galectin-3](#), or cell surface [CD29](#), [CD51](#), and [CD61](#) was determined by [flow cytometry](#) before and after adhesion. [2005]

Both [CD29](#) and [CD3](#) were expressed at normal levels on [lymphocytes](#) from patients > 3 mo after allo-BMT, whereas [T cell](#) interaction with [ECM](#) through VLA proteins or crosslinking of VLA beta 1 expressed by [T cells](#) with anti-CD29 mAb results in poor induction of [CD3-mediated T cell](#) proliferation for a prolonged period (> 1 yr) after allo-BMT. [1994]

Members of the beta 1 ([CD29](#) [?]) [integrin](#) family are involved in cellular adhesion to [extracellular matrix](#) [?]. [1991]

Sixty-six percent of the DCM biopsies presented [CD29](#) abundance also within the [extracellular matrix](#) and the [sarcolemma](#). [1999]

Conversely, some [CD98](#) [?] antibodies were potent inhibitors of [CD29](#)-induced aggregation. [2001]

Only a percentage of the FDC population was positive for the VLA beta-1- and alpha-3-chain ([CD29](#), [CD49c](#)), the [vitronectin receptor](#) ([CD51](#)) and the [vascular cell adhesion molecule-1](#) ([VCAM-1](#)). [1992]

Cynaropicrin potently blocked [CD29](#) (beta1 integrins)- and [CD98](#) [?]-induced homotypic aggregation with IC(50) values of 3.46 and 2.98 microM, respectively, without displaying cytotoxicity. [2004]

In this study we have examined inhibitory effect of cynaropicrin on activation of major adhesion molecules [[CD29](#) (beta1 integrins), [CD43](#), and [CD98](#) [?)] on the cells assessed by U937 (promonocytic cells) homotypic aggregation. [2004]

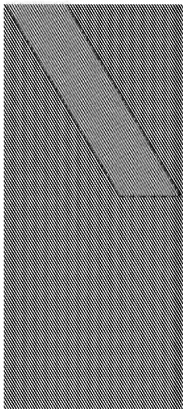
In [spleen](#), [T cells](#) were of a minor population (< 2% of total cells), and not all expressed activation markers for [CD29](#) (very late antigen-1 ([VLA-1](#))), IL-2R and HLA-DR. [1995]

This screening identified mAbs that consistently reacted with both putative myeloid ([CD19](#), [CD22](#), [CD23](#), [CD27](#), [CD29](#), [CD32](#) [?], [CD49d](#), [CD81](#), [CD86](#), [CD88](#), [CD163](#), [CD165](#)) and B cell ([CD19](#), [CD22](#), [CD23](#), [CD27](#), [CD29](#), [CD32](#) [?], [CD49d](#), [CD81](#), [CD86](#), [CD88](#), [CD165](#)) activation or differentiation antigens. [2007]

However, the expression of some [integrin](#) receptor subunits, such as [CD29](#), [CD49a](#), and [CD49f](#), was apparently reduced in the etoposide-resistant subclones. [2006]

Inhibition of [CD29](#) /[TNF-alpha](#) might be a therapeutic option to limit endothelial dysfunction following [cardiac surgery](#) with [extracorporeal circulation](#). [2004]

[Cardiac surgery with extracorporeal circulation](#): neutrophil transendothelial migration is mediated by beta1 [integrin](#) ([CD29](#)) in the presence of [TNF-alpha](#). [2004]



We quantified the freshly isolated as well as cultured primary human keratinocytes by their expression of the beta(1) integrin (CD29) in combination with the expression of the alpha(6) integrin (CD49) and the transferrin receptor (CD71) by flow cytometric methods. [2008]



FNR8 will prove to be a highly useful marker for genetic linkage studies of multiple endocrine neoplasia type 2A (MEN2A) as well as for chromosome-10 linkage studies in general. [1989]



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Special thanks to Chris Sander for his continuing support.